

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) An energy consumption meter comprising:

- a first input for providing a first input signal derived from a voltage;
- a first analog-to-digital converter electrically connected to the first input to generate a first output signal based on the first input signal;
- a second input for providing a second input signal derived from a current;
- a second analog-to-digital converter electrically connected to the second input to generate a second output signal based on the second input signal;
- a multiplier to combine signals corresponding to the first and second output signals;
- a phase evaluation block comprising two inputs, one of the two inputs being that are electrically connected to the first input and another of the two inputs being electrically connected to the second input, the phase evaluation block to measure a phase difference that corresponds to a phase difference between the first input signal and the second input signal, and the phase evaluation block comprising an output that is electrically connected to a phase correction block;

and

the phase correction block electrically connected to an output terminal of one of the first and second analog-to digital converters, the phase correction block to correct for the phase difference in one of the first output signal and the second output signal.

2. (Previously Presented) The energy consumption meter of claim 1, wherein the phase evaluation block comprises means for permanently storing a phase correction value.

3. (Previously Presented) The energy consumption meter claim 1, further comprising:
a first limiting amplifier to couple the first input to an input of the phase evaluation block;
and
a second limiting amplifier to couple the second input to an input of the phase evaluation block.

4. (Previously Presented) The energy consumption meter of claim 1, wherein the first and the second analog-to-digital converters comprise sigma-delta converters.

5. (Previously Presented) The energy consumption meter of claim 1, further comprising:
an integrator electrically connected downstream of the multiplier relative to the first and second inputs.

6. (Previously Presented) The energy consumption meter of claim 1, wherein the first and the second analog-to-digital converters, the phase correction block, and the phase evaluation block are implemented using integrated circuit technology.

7. (Previously Presented) The energy consumption meter of claim 1, further comprising:
a nonconductively coupling transfer arrangement for providing the first input signal
and/or the second input signal to the first input and/or the second input.

8. (Previously Presented) The energy consumption meter of claim 7, wherein the
nonconductively coupling transfer arrangement comprises a transformer.

9. (Previously Presented) The energy consumption meter of claim 1, further comprising:
a test signal generator to generate a test signal, the test signal generator being electrically
connected to the first input and to the second input.

10. (Previously Presented) The energy consumption meter of claim 1, wherein the phase
evaluation block comprises memory for permanently storing a phase correction value.

11. (Previously Presented) The energy consumption meter claim 10, further comprising:
a first limiting amplifier to couple the first input to an input of the phase evaluation block;
and
a second limiting amplifier to couple the second input to an input of the phase evaluation
block.

12. (Previously Presented) The energy consumption meter of claim 11, wherein the first and the second analog-to-digital converters comprise sigma-delta converters.

13. (Previously Presented) The energy consumption meter of claim 12, further comprising:

an integrator electrically connected downstream of the multiplier relative to the first and second inputs.

14. (Previously Presented) The energy consumption meter of claim 13, wherein the first and the second analog-to-digital converters, the phase correction block, and the phase evaluation block are implemented using integrated circuit technology.

15. (Previously Presented) The energy consumption meter of claim 14, further comprising:

a nonconductively coupling transfer arrangement for providing the first input signal and/or the second input signal to the first input and/or the second input.

16. (Previously Presented) The energy consumption meter of claim 15, wherein the nonconductively coupling transfer arrangement comprises a transformer.

17. (Currently Amended) The energy consumption meter of claim 16, further comprising a test signal generator to generate a test signal, the test signal generator being electrically connected to the first input and to the second input.

18. (Previously Presented) The energy consumption meter of claim 1:
wherein the first analog-to-digital converter is directly connected to the first input;
wherein the second analog-to-digital converter is directly connected to the second input;
wherein the two inputs of the phase evaluation block are connected to the first input and to the second input via amplifiers;
wherein the output of the phase evaluation block is directly connected to the phase correction block; and
wherein the phase correction block is directly connected to the output terminal of one of the first and second analog-to digital converters.

19. (Previously Presented) The energy consumption meter of claim 1, further comprising:
a first digital filter to alter the first output signal; and
a second digital filter comprising the phase correction block, the second digital filter to alter the second output signal to compensate for the phase difference;
wherein the signals combined by the multiplier comprise output signals of the first digital filter and the second digital filter.

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20. (Previously Presented) The energy consumption meter of claim 1, wherein at least one of the first input and the second input is DC-isolated from a signal source.